



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,549	10/27/2005	Graeme Alexander	5253-00002	1418
26753 7590 06/22/2010 ANDRUS, SCEALES, STARKE & SAWALL, LLP 100 EAST WISCONSIN AVENUE, SUITE 1100 MILWAUKEE, WI 53202			EXAMINER GRAY, JILL M	
			ART UNIT 1782	PAPER NUMBER
			MAIL DATE 06/22/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,549	Applicant(s) ALEXANDER ET AL.	
	Examiner Jill Gray	Art Unit 1782	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9,11-31,33-47 and 49-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-9,11-31,33-47 and 49-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 1, 2010 has been entered.

2. Pursuant to the entry of the amendment of June 1, 2010, the status of the claims is as follows: Claims 1-4, 6-9, 11-31, 33-47, and 49-52 are pending.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-4, 6-9, 11-31, 33-47, 49-50, and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Dickinson, European Patent Application EP 0559382 A1 (Dickinson).

Regarding Independent claims 1 28 and 47

Dickinson discloses a fire resistant composition comprising 10-50% by weight of the total weight of the composition of a polymer base composition, about 5 to 60% by

Art Unit: 1782

weight of an additive system exclusive of the inorganic oxide constituent, and a first inorganic oxide constituent and a second inorganic oxide constituent which melts at temperatures of less than 1000°C and includes metal oxides, phosphorus oxides and boron oxide, as required by applicants. See entire document, and for example, abstract and column 5, lines 15-46 and column 8, lines 16-20. The additive system exclusive of the inorganic oxide constituent includes silicate mineral fillers such as mica. See column 6, lines 19-36. Regarding the requirement that after exposure to an elevated temperature the residue remaining is a ceramic in an amount of at least 40% by weight of the total fire resistant composition and wherein the source of fluxing oxide is present in an amount to provide the residue with fluxing oxide in an amount of from 1 to 15% by weight of the residue remaining after exposure to an elevated temperature experienced under fire conditions whereby the fluxing oxide provides binding of the particles of silicate mineral filler to form a coherent ceramic residue at temperatures encountered under fire conditions, Dickinson discloses the same type of composition contemplated by applicants. In particular, Dickinson discloses an organic polymer base, silicate mineral filler, and fluxing oxides, wherein said components are present within the same range as applicants. The same composition necessarily has the same properties. Accordingly, the examiner has reason to believe that the properties of the composition of Dickinson are the same as well, in the absence of factual evidence to the contrary. Moreover, since the prior art teachings set forth a composition whereby the amounts of each component are at least within the minimum required of present claims 1 and 28, and further discloses the formation of a stable char structure, and a rigid foam of

Art Unit: 1782

ceramic ash (note column 6, line 38), the skilled artisan would reasonably presume that the composition of Dickinson functions in the same manner as applicant's after exposure to elevated temperatures, and has the same or a substantially similar end composition, in the absence of factual evidence to the contrary. "Where the claimed and prior art products are identical or substantially in structure or composition, or are produced by identical or substantially processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911m F.2d 705, 709, 15 USPQ2d 1655, (Fed. Cir. 1990).

Regarding Dependent claims 2-4, 6-9, 11-20, 27-31, 33-45, and 49-50

Regarding claims 2 and 29, Dickinson discloses that the silicate mineral filler is present in an amount of about 5 to 60% by weight. See column 8, lines 16-20.

Regarding claims 3-4, 12-15, 24, 27, 30-31, 35, and 39-41, it is the examiner's position that Dickinson discloses the same type of composition contemplated by applicants. In particular, Dickinson discloses an organic polymer base, silicate mineral filler, and fluxing oxides, wherein said components are present within the same range as applicants. The same composition necessarily has the same properties.

Accordingly, the examiner has reason to believe that the properties of the composition of Dickinson are the same as well, in the absence of factual evidence to the contrary.

Regarding claims 6 and 33, as set forth above, Dickinson discloses the formation of a stable char structure, and a rigid foam of ceramic ash (note column 6, line 38).

Regarding claims 7-9, 34, and 37, Dickinson discloses a mixture of inorganic oxides such as glass frits and that other components such as zinc borate can be added. Also, Dickinson discloses that a commercially available material "CEEPREE" can be used, wherein "CEEPREE" is a mixture of glass frits. See column 5, and column 6.

Regarding claims 9 and 36, Dickinson discloses that the first oxide melts between 350°C to 450°C and that the second inorganic oxide melts at temperatures between about 650°C and 1000°C. See column 5, lines 20-22 and 47-50.

Regarding claims 11 and 38, Dickinson discloses that his composition comprises at least one oxide of an element of the type contemplated by applicants, such as lead or boron.

Regarding claims 16-17 and 42-43, Dickinson discloses an organic base polymer that is of the same type set forth by applicants, such as rubber, polyolefins or vinyl polymers. See column 5, lines 6-15.

Regarding claim 18, Dickinson discloses that the polymer base composition comprises from 10 to 50% by weight of the composition. See column 8, line 17.

Regarding claim 19, Dickinson discloses a silicate mineral filler of the type set forth by applicants. See column 6, line 33.

Regarding claims 20 and 44, Dickinson discloses that his composition includes a first inorganic oxide and a second inorganic oxide, whereby said inorganic oxides can

Art Unit: 1782

be metal oxides of iron, alkali metals, alkaline earth metals and zinc oxides. See column 5, lines 30-42.

Regarding claims 49-50, Dickinson discloses that his fluxing oxide comprises fluxing components that are of oxides of the type set forth by applicants. As to the language of "consisting essentially of", the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. For the purpose of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." In an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. See MPEP 2111.03.

Regarding claim 45, Dickinson discloses a fire resistant cable of the type set forth by applicants. See Figure 1.

Therefore, the teachings of Dickinson anticipate or in the alternative, render obvious the invention as claimed in present claims 1-4, 6-9, 11-20, 27-31, 33-45, 47, and 49-50.

6. Claims 21-23, 25-26, 46 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dickinson, European Patent Application EP 0559382 A1 (Dickinson) in view of Romenesko et al., 6,433,049 B1 (Romenesko), for reasons of record.

Dickinson is as set forth above, but does not teach the inclusion of a silicone polymer.

Romenesko is as set forth in the previous Office Action and teaches a fire resistant composition that can be used as cable and wire insulation, said composition comprising a polyolefin, a silicone polymer, and particulate silicate mineral filler, wherein each component is present in amounts within the present claimed ranges. See entire document, and for example, abstract and column 4, lines 10-20.

It would have been obvious to one having ordinary skill in the art to modify the composition of Dickinson by adding a silicone polymer, as taught by Romenesko with the reasonable expectation of the silicon polymeric material in the composition of Dickinson as modified by Romenesko becoming ceramified upon exposure to high temperature, and yielding a dense ceramic with excellent dimensional stability, strength and electrical insulating properties.

Therefore, the combined teachings of Dickinson and Romenesko would have rendered obvious the invention as claimed in present claims 21-23, 25-26, 46, and 52.

Response to Arguments

7. Applicant's arguments filed June 1, 2010 have been fully considered but they are not persuasive.

Applicants argue that Dickinson does not have any working examples and thus fails to provide any specific teaching on the relative proportion of polymer, silicate mineral and fluxing oxide, let alone the amount of fluxing oxide as a proportion of residue left after combustion, further arguing that Dickinson fails to teach the importance

Art Unit: 1782

of controlling the proportion of fluxing oxide in order to obtain a material that converts to a coherent ceramic residue when all organic components are consumed in a fire.

In this regard, it is the examiner's position that a reference is not limited to that which is disclosed in the examples, but must be relied upon for the entirety of their teachings. In addition, it is the examiner's position that whether Dickinson teaches the importance of controlling the proportion of fluxing oxide in order to obtain a material that converts to a coherent ceramic residue is not germane and does not preclude his clear teachings of a polymer base composition having an additive system that is the same as or substantially similar to that contemplated by applicants, whereby the skilled artisan would reasonably presume that the composition of Dickinson functions in the same manner as applicants' after exposure to elevated temperatures.

Applicants argue that Dickinson teaches away from mineral fillers for use in cable insulation.

In this regard, it should be noted that claim 1 is not limited to cable insulation. Nonetheless, the examiner disagrees that Dickinson teaches away from mineral fillers for use in cable insulation. In particular, it is the examiner's position that upon heating, the formation of an encapsulated fused layer results in some degree of insulating inner coating layers on a wire from damage.

Applicants argue that the declaration of Don Rodrigo clearly shows the critical nature of the fluxing oxide and its proportions by weight of non-combustible material.

In this regard, the comparison must be with the closest prior art, in this case, Dickinson. Accordingly, the declaration of Rodrigo is insufficient to overcome the present rejections.

Applicants argue that the criticality of the components of present claim 1 is not recognized by Dickinson, let alone the proportions of those components, in particular, the fluxing oxide, whose proportion and nature is critical to achieving dimensional stability and strength is not recognized.

In this regard, as set forth above and incorporated herein, the composition of Dickinson is the same as or substantially similar to that composition claimed by applicants. Dickinson teaches the same components that are added in proportions that overlap the present claimed ranges. Therefore, Dickinson anticipates or in the alternative renders obvious the present claimed invention.

Applicants argue that it would not have been obvious to modify Dickinson in light of Romenesko because Dickinson does not disclose the criticality of the nature of the of the present claims.

This is not found to be persuasive because the motivation to modify Dickinson in light of Romenesko is the desirability of producing a dense ceramic with excellent dimensional stability, strength and electrical insulating properties.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:00-6:00.

Art Unit: 1782

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/
Primary Examiner
Art Unit 1782

jmg